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(54) GEOGRAPHICALLY LIMITED COMMUNICATIONS SYSTEM AND METHOD

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- (60) Provisional application No. 61/392,086, filed on Oct. 12, 2010.
- (51) Int. Cl.

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 #04L 29/06 (2006.01)

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 #04W 4/18 (2009.01)

 G06Q 50/00 (2012.01)

 G06Q 10/10 (2012.01)
- (52) U.S. Cl. CPC *H04L 51/04* (2013.01); *G06Q 10/107*

(2013.01); **G06Q** 50/01 (2013.01); **H04L** 65/403 (2013.01); **H04W** 4/021 (2013.01); **H04W** 4/1021 (2013.01); **H04W** 4/1021 (2013.01); **H04L** 51/20 (2013.01); **H04L** 51/32 (2013.01); **H04L** 51/38 (2013.01)

(58) Field of Classification Search

(10) **Patent No.:**

CPC H04L 51/20; H04L 51/32; H04L 51/38; H04L 51/24; G06Q 10/107; G06Q 50/01; H04W 4/021; H04W 4/185 See application file for complete search history.

(56) References Cited

U.S. PATENT DOCUMENTS

2003/0200192	A1*	10/2003	Bell et al	707/1
2004/0189476	A1*	9/2004	Borovoy et al	340/573.1

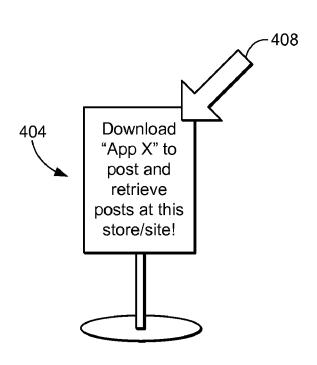
^{*} cited by examiner

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(57) ABSTRACT

A geographically limited communications system comprises a server for receiving one or more posts or messages from one or more location-enabled portable devices. The server may store these posts and retrieve them based on location information stored along with the posts. This allows only posts left at a particular location to be viewed by users at that location. In addition, posts may only be left at a user's current location in one or more embodiments. The server may notify a user when another user leaves a post near or at one of the user's previous posts.

11 Claims, 2 Drawing Sheets



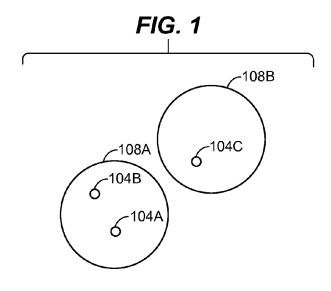


FIG. 2

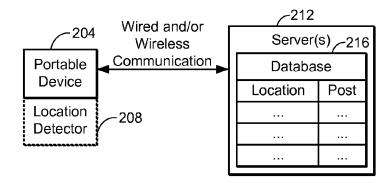
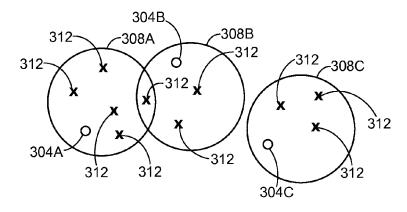


FIG. 3



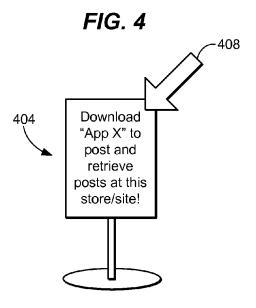


FIG. 5 504 520 544~ 512 Server -516 -532 Portable Device Display **GPS** Communication Processor 548-Device 536 Camera Processor Storage Mic **-** 508 524-Communication Device ~540 **-528**

GEOGRAPHICALLY LIMITED COMMUNICATIONS SYSTEM AND METHOD

CROSS-REFERENCE TO RELATED APPLICATIONS

This application is a continuation of U.S. application Ser. No. 13/271,433, filed Oct. 12, 2011, which claims priority to U.S. Provisional Application No. 61/392,086, filed Oct. 12, 2010

BACKGROUND OF THE INVENTION

1. Field of the Invention

The invention relates generally to electronic communications, and in particular to a social networking system and method where communication is time agnostic but geographically limited.

2. Related Art

Traditional social networking systems are designed for the 20 purpose of serving the widest audience possible. For example, traditional systems strive to provide full or complete access to posts, images, status updates, and other information thereon from anywhere and at anytime. With the advent of mobile devices, traditional systems now strive to provide 25 complete access to their system or network even from mobile devices. One problem with traditional social networking systems is that they are inherently difficult to integrate with the "real" world.

From the discussion that follows, it will become apparent that the present invention addresses the deficiencies associated with the prior art while providing numerous additional advantages and benefits not contemplated or possible with prior art constructions.

SUMMARY OF THE INVENTION

Various geographically limited communications systems and methods are disclosed herein. For instance, in one exemplary embodiment, a communication system is disclosed with 40 such communication system comprising one or more communication devices that receive a plurality of posts. Each of the plurality of posts comprises location information and associated with at least one user identifier.

One or more processors are also part of the communication 45 system. The processors identify a subset of the plurality of posts that geographically overlap a new post received by the one or more communication devices. Each of the plurality of posts is deemed to geographically overlap the new post by determining if the new post is within one or more predefined 50 areas around each of the plurality of posts. The processors also generate a notification to one or more users, with the one or more users being those identified by the at least one user identifier associated with each of the one or more posts in the subset. The one or more users are outside the one or more 55 predefined areas when the notification is generated.

One or more storage devices that store the plurality of posts may be part of the communication system as well. In addition, it is noted that the one or more posts in the subset may be transmitted to the one or more users via the one or more communication devices or one or more additional communication devices.

embodiment of the common FIG. 4 is a perspect with the one or more additional communications system.

In another exemplary embodiment, a communication system comprises one or more communication devices that receive a plurality of user generated content. Each of the 65 plurality of user generated content comprises location information and associated with at least one user identifier.

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One or more processors are also included. The processors identify a subset of the plurality of user generated content by determining if the new user generated content received by the one or more communication devices is within one or more predefined areas around each of the plurality of user generated content, and generate a notification to one or more users. The one or more users are those identified by the at least one user identifier associated with each of the user generated content in the subset. The one or more users are outside the one or more predefined areas when the notification is generated.

Similar to above, one or more storage devices that store the plurality of user generated content may be part of the communication system. Also, the user generated content in the subset may be transmitted to the one or more users via the one or more communication devices or one or more additional communication devices.

In another exemplary embodiment, a non-transitory storage medium is disclosed, with such storage medium storing instructions that, when executed, cause one or more processors to identify a subset of a plurality of user generated content by determining if new user generated content is geographically located within one or more predefined areas around each of the plurality of user generated content. Each of the plurality of user generated content comprises location information and is associated with at least one user identifier.

The instructions also cause the processors to generate a notification to one or more users, with the one or more users being those identified by the at least one user identifier associated with each of the user generated content in the subset. The one or more users are outside the one or more predefined areas when the notification is generated. It is noted that the instructions may also cause the one or more processors to transmit the user generated content in the subset to the one or more users.

Other systems, methods, features and advantages of the invention will be or will become apparent to one with skill in the art upon examination of the following figures and detailed description. It is intended that all such additional systems, methods, features and advantages be included within this description, be within the scope of the invention, and be protected by the accompanying claims.

BRIEF DESCRIPTION OF THE DRAWINGS

The components in the figures are not necessarily to scale, emphasis instead being placed upon illustrating the principles of the invention. In the figures, like reference numerals designate corresponding parts throughout the different views.

FIG. 1 is a block diagram illustrating the geographic limitation of an exemplary communications system;

FIG. 2 is a block diagram illustrating and exemplary communications system;

FIG. 3 is a block diagram illustrating the geographic limitation of posting and retrieving of posts of an exemplary embodiment of the communications system;

FIG. **4** is a perspective view of an exemplary placard; and FIG. **5** is a block diagram illustrating an exemplary communications system.

DETAILED DESCRIPTION OF THE INVENTION

In the following description, numerous specific details are set forth in order to provide a more thorough description of the present invention. It will be apparent, however, to one skilled in the art, that the present invention may be practiced

without these specific details. In other instances, well-known features have not been described in detail so as not to obscure the invention

In general, the communications system disclosed herein allows its users to leave or post information at one or more 5 geographic locations. Preferably, users may only post information to the geographic location they are at or in. Likewise, users may only view or retrieve information posted in that geographic location. For example, as shown in FIG. 1, User 1 and 2 104A, 104B may only view and leave posts in Geographic Area 1 108A, while User 3 104C may only view and leave posts in Geographic Area 2 108B.

This provides unique advantages. One advantage is that the communications system may be tied to the "real" or physical world. This is because users' may be limited to viewing only 15 the information posted by other users that were or are in the user's current geographic location. In addition, users may be permitted to post information only to the geographic location where the users are currently located. Therefore, the communications system is tied to the physical location of a user.

In this manner, rather than being inundated with information from faraway places, the user may be presented with posted information that is geographically relevant. This is highly advantageous in that it allows a user to not only communicate with those sharing geographic similarity (i.e., those 25 that are or were in the same area), but also to discover new people within the user's geographic area. Stated another way, the communications system allows two or more users to have a conversation (or otherwise communicate) in a geographic location without the users being in the geographic location at 30 the same time.

In one exemplary circumstance for example, a first user may have lunch at a pizza place and post one or more comments, photos, or other data while at the pizza place. An hour later, a second user may be enjoying a pizza at the same pizza 35 place. The second user may access the communications system and be presented with previous posts made within the pizza place. Finding the first user's post interesting, the second user may respond or comment on the first user's post. In one embodiment, the first user may be immediately notified 40 of any responses or comments to his or her posts. The response may be presented to the first user or alternatively, the first user may be required to return to the pizza place before the response may be retrieved. In another alternate embodiment, the first user may not be aware of the response until he 45 or she is at the pizza place again and is able to view the posts/responses made within the pizza place.

The first user may respond to any responses the first user receives. In similar manner to the first user above, the second user may be notified of such a response, presented the 50 response, and/or be required to be within the pizza place to be notified of and/or retrieve the response.

The posts may be a variety of information. For example, a user may write a review of a store or restaurant. A user may comment on events occurring at the time or write the user's 55 thoughts. The posts may contain audio, video, images, and other data. For example, the posts may be turns in a game, such as in a chess or checkers game. The game board may be accessible to any users within the geographic area such that a number of users may play or take turns in the same game. The 60 posts may promote goods or services as well.

As shown in FIG. 2, posts may be created on a portable device 204, such as a smart phone, tablet, laptop, PDA or the like. The portable device 204 may have a location detector 208 for determining the geographic location of the portable 65 device. For example, a location detector 208 may comprise a GPS device or a cellular receiver capable of triangulating or

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otherwise determining the location of the portable device **204**. The portable device **204** may have a wired or wireless communications device for communicating with one or more servers **212** of the communications system.

A server 212 may access one or more storage devices, such as hard drives, flash storage, optical storage, and the like to retrievably store data. As shown in FIG. 2 for example, the server 212 stores a database 216 containing posts received from one or more portable devices 204. As can be seen, the database 216 may store the location at which a post was made (e.g., GPS, latitude/longitude, or other coordinates) along with the contents of the post. In this manner, the location of the post is retrievably stored on the server 212.

A user may filter posts based on various criteria. In one or more embodiments, this may occur by sending various queries to the database 216. For example, posts from particular types of users may be filtered. To illustrate, a user may only want to view posts from promoters or advertisers such as to find a sale or lunch special within his or her vicinity. The user 20 may also filter posts based on usernames or user identifiers. For example, the user may only view posts from one or more particular users in some embodiments. The user may also filter posts based on time. For example, posts that are beyond a certain age may not be presented to the user. It is contemplated that a user may filter posts based on location for example, the user may reduce the size of the geographic area from which posts are retrieved. Alternatively, the user may expand the size of the geographic area in some embodiments. It is noted that the user may have to pay a fee to expand the size of the geographic area in which he or she may make or retrieve posts.

In one or more embodiments, the user may find other users based on the location of the other user's posts. For example, another user that has made posts in one or more of the same geographic location in which the user has made posts may be presented to the user by the system. In this manner, a user can find other users that share places with the user and potentially become friends with the user. It is contemplated that user's may opt-in or opt-out of this feature.

In another exemplary circumstance, a first user in a waiting room, in line, or otherwise waiting may post a message, start a game, or play a turn of a game. Immediately after or some time after, a second user in the same geographic location may post a response or play a turn of a game in response to the first user's post. A third user in the same geographic location (but at a later time) may then post a response or play another turn of the game and so on and so forth until the game is finished or a new game is started. Any of the users within the geographic location may also post information such as messages, photos, audio, video, games, or other data.

Referring to FIG. 3 for example, User 1 304A and User 2 304B can respectively see posts 312 in Geographic Area 1 308A and Geographic Area 2 308B. As can be seen these geographic areas 308A,308B are adjacent and overlap. The post 312 in the overlapping area of geographic areas 308A, 308B are visible to both User 1 and 2 304A,304B, but the other posts are not visible to both users. When the users 304A,304B posts however, their post 312 will be associated with the current location of the user that made the post. Thus, in FIG. 3 for example, a post 312 by User 1 304A would be left at the current location of User 1.

In some circumstances a user may be permitted to view posts 312 in a larger area or radius. For example, User 3 304C cannot see any posts 312 in Geographic Area 1 308A or Geographic Area 2 308B as illustrated in FIG. 3. However, the range or area of User 3 304C could be extended beyond Geographic Area 3 308C to allow User 3 to view posts 312 in

the other areas for example. Typically though, User 3 304C (or any other user) would only be permitted to make or leave a post 312 at his or her current location.

In one or more embodiments, a physical placard or other indicator, such as a poster, sign, or the like, may be present at 5 various physical locations to encourage users to interact with the communications system by posting or retrieving information. An exemplary placard 404 is shown in FIG. 4. For example, a placard 404 may identify software used to interact with the communications system and encourage users to 10 download and install the software and post or retrieve information. The placard 404 may be placed in areas where there are potential users, such as pedestrian areas, waiting areas, restaurants, bus stops, shops, lounges, lobbies, offices, and the like. It is contemplated that posting or retrieving informa- 15 tion may be an alternate form of entertainment for the users.

The placard 404 may be electronic in one or more embodiments and be configured to display previous posts. For example, as shown by the placard 404 in FIG. 4, one or more lights 408 could be included. In some embodiments, the plac- 20 ard may be configured to collect user input such as to allow users to make posts in addition to or instead of retrieving posts. It is contemplated that existing electronic displays or signage may be used as a placard 404 in one or more embodiments, such as to display one or more posts within the geo- 25 graphic area of the placard.

It is noted that a placard 404 is well suited for the communications system herein since posts may generally only be made and retrieved within a geographic location. Because of this, the placard is not simply promoting another social network, but rather is informing users that others may have posted in this location and that the user may post to this location. For example, in a restaurant, store, line, waiting room, or other area, people may view the placard and be enticed or interested to see what other users may have posted 35 to this geographic location prior to them. The application or software identified by the placard may then be downloaded and installed by the users.

Users may become known for "good" posts. For example, sit in a restaurant, food to order, whether or not a particular brand of clothing runs large or small, product reviews, service reviews, whether or not something is a good deal, when is the best time to go to a restaurant or other venue. Such a user may then become known and may receive favorable ratings, such 45 as points. The more points a user has, the more likely others will view his or her posts.

It is contemplated that an owner of a store, restaurant, venue, area, or the like may also post information. For example, a store owner may post recent specials or deals. In 50 one or more embodiments, the owner (or the like) may be given preferred treatment. For example, the owner or other authority of a geographic area may have his or her posts highlighted in some way, such as with unique color(s) relative to other posted information. The owner's post may be larger, 55 ond user may be communicating at one or more geographic cover other posts, or have animated or other eye-catching elements. The owner's post may also or alternatively have audio, video, images, or other features not permitted for "regular" posts. It is contemplated that the owner or another user may pay a fee to distinguish their posts from ordinary 60

In yet another exemplary circumstance, a first area in an area of high pedestrian traffic, such as a tourist area, may post information recommending sights/attractions, shops, restaurants, that he or she thought were worth visiting. Upon enter- 65 ing the tourist area, a second user may then view such posted information and visit these areas or conduct further research

on the first user's recommendations. Ideally, the first user's posted information will pertain to sites within the geographic area, or at least within walking distance from the geographic area. Alternatively, the second user, having visited some of those sites, may disagree with the first user and post information indicating the same. A third user may then retrieve both the first user's post and the second user's response and make

a decision based on both user's information.

A geographic location may be any area on Earth where a user may be located and his or her location determined or detected. The geographic location may be an area of various shapes and sizes. For example, in one embodiment, the geographic location may be a circular or other shaped radius around the user's current location. The size of the radius may vary. In one embodiment, the size of the radius may be similar or equal to the potential error in the user's location measurement. For example, where a GPS apparatus or other location detector has a potential error of X feet (or other measure of distance), the geographic location may be defined as a radius approximately or equal to X feet.

A geographic location may also correspond to physical landmarks, borders, and the like. For example, a geographical location may be defined by the perimeter or confines of a building, street, lot, park, stadium, or other structure or predefined area. In this manner, if a user is within a building (or other structure/predefined area), the user's geographic location may be defined as the building rather than, for example, a radius around the user. It is contemplated that a geographic location may also be within a structure/predefined area. For example, the geographic location may be a department or section of a store, an office within a building, a store at a strip mall, etc. . . .

The user's location may be pinpointed to varying degrees. In one or more embodiments, the best available or most accurate user location may be used. The user's location may be determined by various devices now known or later developed. For example, the user's location may be determined by GPS or by triangulation of cellular or other signals.

It is contemplated that the geographic locations may be a user may post helpful information such as the best places to 40 relatively small, such as between 10 and 300 feet around a user's location. This helps filter the number of posts the user may need to sift through. In addition, this keeps the communications system highly localized and tied in to the physical world. The geographic locations may be smaller or larger than the exemplary range specified above. As stated, it is contemplated that users may have to pay a fee to expand (or contract) the "default" geographic area in which they may post information or retrieve information. For example, a promoter may desired to post information at a number of locations. The promoter may either physically locate him or herself to such locations and post information, or it is contemplated that the promoter may pay a fee to be allowed to post such information. Likewise for retrieving information.

> In another exemplary circumstance, a first user and a seclocations that they both visit. The users may be or begin to identify one another based on their respective usernames and/or other identifiers. Users may setup alerts or filters which notify the users when a new post of matching one or more particular criteria is in the geographic area. For example, the first and/or second user may have an alert set when new posts by the other user are found within a geographic area. One day, the first user may post information at a geographic location. The second user, also being at the geographic location, may receive an alert of the same. It being apparent that the user's are at the same location at the same time, the users may decide to meet in person for the first time.

It is noted that users may setup a profile. A user profile may include an identifier such as a user name. In addition, the user profile may include information about the user that the user wishes to save and/or share. The user profile may also include one or more photos, videos, and images. A profile may also be 5 generated by the communications system and provided to the user. For example, the communications system may generate an identifier for the user and/or a photo, image, sound, video or other profile data for the user. The user may use the generated profile until the user decides to change it. The gener- 10 ated user profile affords the user a degree of anonymity and also allows the user to begin using the communications system quickly (without having to set up a profile).

In another exemplary circumstance, the communications system may be used to replace traditional fliers. Rather than 15 being immediately identified as a mass mailing, users would know that "fliers" of the communications system were delivered by hand because the communications system generally permits posts to be made only within the geographic location in which the posting user is located. Though users may simply 20 ignore these fliers, one advantage is that the material costs and waste are avoided by distributing the fliers with the communications system rather than on paper or other physical media.

It is contemplated that users may be notified of posts made within particular geographic locations. For example, the user 25 may be notified of a post made at a user's mail box, home, or office. The post may also be provided along with the notification. Alternatively, the user may need to be at these particular locations to be notified of and/or retrieve the post. It is contemplated that users may be provided with authentication 30 information in one or more embodiments. This allows the source of a post to be verified. For example, an encryption or key system may be used to verify the source of posted information. In this manner, important communication or verifiable communication may occur. Users may be required to pay 35 a fee for verifiable communication within the communications system.

Posted information may move in one or more embodiments. For example, information posted on board a plane, at or in a car or other vehicle may move with the vehicle. To 40 illustrate, information posted at a parked car may be associated with the car and/or the location where the car was parked. In this way, a user may post information "on" a car and other users may retrieve the information when at the car, regardless of where the car is.

In one or more embodiments, a portable device carried by a user may keep track of the users movements as the user goes about his or her business. The user may then be provided the option of viewing posted information at geographic locations that the user was at before. For example, a user may retrieve 50 posts along the path he or she takes from point A to point B, even though the user may be at another location when he or she decides to view posted information. Otherwise, the user is typically restricted to viewing posts within the geographic location that the user is currently in.

In another exemplary circumstance, a plurality of users may be at an event, such as an event of future historical significance. Users may post information containing their thoughts, eyewitness accounts, experiences, etc. . . . This information may also contain video, audio, images, and other 60 data as disclosed above. The posted information may be stored and retrieved by other users that subsequently visit the event site to get a first hand account of the event.

A similar thing may occur at landmarks. For example, a memories relating to the memorial. Subsequent users visiting the memorial may then retrieve the posted information to get

a personal account relating to the memorial. It is contemplated that the owner or authority in charge of the memorial may verify the accuracy and truth in such posts and remove those that are false or unverified. For example, a user having personal experience may first verify his or her identity with the authority and thereafter his or her posts may be endorsed by the memorial (or other site) as having significance. These posts may then be distinguished from other posts, such as by color, size, font, or other characteristic(s).

In addition, to the ability of a site owner or authority to post responses to disagreeable posts or other posts, it is contemplated that the authority may be permitted to remove or request that particular posts be removed. In one embodiment, the communications system may provide a voting system where posts may be automatically removed or deprioritized based on the number of negative votes or points a post receives. The voting system may also apply to the user making such posts. In this manner, negative votes will be associated with the user him or herself thus making it increasingly less likely that future posts by such user will be viewed by others. It is contemplated that a user may be removed from the communications system if a particular threshold of negative votes or points is received.

Operation and components of the communications system will now be described. As can be seen in FIG. 5, in one or more embodiments, the communications system may comprise one or more servers 504 configured to receive posted information, store the information, and retrieve the information. The servers 504 may have their own storage devices 508 or be in communication with storage devices to stored/retrieve posted information. In one or more embodiments, the servers 504 may have one or more processors 512 which execute machine readable code or other instructions fixed on a tangible/non-transitory medium to perform the functions described herein. The processors 512 may also or alternatively be hardwired to perform one or more of such functions.

The servers may receive posts via a network or other communications interface 516 or device. As stated above, posts may be received from one or more portable devices 520 via a wired or wireless communications link 524. Such communications link 524 may be established by a communications device 516 of the server 504 and a communications device 528 of a portable device 520. A post may contain or be received along with location information, such as GPS coordinates, identifying the location at which the post was/is made. Alternatively, the server 504 may be configured to determine the location based on other information. For example, the IP address from which a post is received may be used to determine the location at which the post was made. Location information may be generated by a GPS device 532 or the like at the portable device 504.

The servers 504 may store the post associated with the location. For example, as disclosed above, a database or the like may be used to store information containing the post and 55 information containing the location of the post. This information may be associated or linked or stored together so as to allow the post and the location of the post to be associated. Again, the post may comprise text, images, video, audio, and other data. The location may be coordinates, such as GPS or other coordinates. Various other information for identifying a location may be used. It is contemplated that an altitude may also be included in the location information, such as to identify the elevation or floor in which a post was made.

Posts may be stored with additional location information. user visiting a memorial, statue, or the like may post personal 65 For example, an address may be stored to help pinpoint the user's location. Alternatively or in addition, the direction a user is facing when the post was made may be stored. Such

information may be detected by the user's portable device or may be provided by the user. Posts may also be stored with categorization information to allow the posts to be stored associated with a category and retrieved according to categories. The posts may each belong to one or more categories. 5 Some or all of the categories may be user defined or automatically assigned. For example, a user may categorize his or her posts. Alternatively or in addition, the communications system (e.g., a server) may categorize a post based on for example, the location in which it was made. To illustrate, a post may be categorized type of site/location (e.g., restaurant, store, office, home) where the post was made. Posts may also be stored with a timestamp in some embodiments.

A server 504 may retrieve one or more posts from a storage device 508 based on the location of the requesting user. As 15 discussed above, the location of the requesting user may be provided with a request from a user's portable device 520 or may be determined by the server, such as via the portable device's IP address. In one or more embodiments, only posts having a location within the current geographic location of 20 the requesting user are provided by the server 504 to the requesting user's portable device 520. The posts may be provided in various orders and the user may specify various filters for the posts, such as disclosed above. In one embodiment, the posts may be ordered based on time, the user that 25 posted them, their location (e.g., from closest to farthest away or vice versa), or other characteristic.

One or more predefined geographic locations may be stored by the one or more servers **504**. For example, geographic locations corresponding to physical landmarks such as buildings, structures, parks, lots, and other areas may be stored. In one embodiment, when a user is located within one of these areas or sites, the user's geographic location may be a predefined geographic location corresponding to the area. For example, if the user is within a building the user's geographic location may be the perimeter or other area of the building rather than, for example, a radius of X feet around the user. It is contemplated that the Earth may be divided into geographic locations such as squares, rectangles, hexagons, and other shapes in some embodiments.

As stated, a portable device **520** may be used by the users to interact with the communications system, such as via a server **504** of the system. Typically, these portable devices **520** will have a GPS **532**, cellular radio, or other location detector configured to determine the users location. The portable device **520** may have one or more processors **548** configured to execute machine readable code stored on a tangible medium to transmit and receive information with the communications system. For example, a software application may be installed on the portable device **520** to interact with the communications system.

The portable device **520** may provide an interface to collect user input such as text that makes up a user's post. For example, a user interface (including a keyboard for example) may be presented to the user on a display **544** or the like to collect user input. The portable device **520** may also include video, image, audio, and other sensors that may be used to record or collect data for a post. For example, a camera **536** and/or microphone **540** may be provided to record visual and/or audio data. Once a post is ready, it may be transmitted to the one or more servers **504** via a communications device **528** of the portable device **520**. The portable device **520** may transmit the user's location, such as in the form of GPS or other coordinates, along with the post. Alternatively, the servers **504** may determine the user's location as discussed above.

The portable device **520** may also provide a user interface for retrieving one or more posts. In general, the posts will be

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those made within the user's current geographical locations. It is noted that the interface may allow the user to setup one or more filters, such as disclosed above, to pare down the number of posts that are presented to the user. The portable device 520 may transmit the user's location to a server as part of or during a request for posts. Though the geographic limitation of the communications system lends itself to portable or handheld device usage, it is contemplated that a desktop or other non-portable computing device may be used as a client in some embodiments. Some exemplary portable devices include smart phones, feature phones, cell phones, GPS devices, portable media players, portable gaming devices, and automobile information centers/systems.

A server 504 may compare the location of incoming posts from one or more portable devices to that of one or more posts already stored by the server. In one or more embodiments, if the location of a new post overlaps or is within a particular distance of a previous post, the server 504 may be configured to notify the user that made the previous post via the user's portable device 520. In this manner, such user is notified of new or recent activity at a location where he or she has left a post before.

The particular distance for such notification may vary. Typically, the distance will be small so that users are only notified when new posts are made close or nearby their previous post(s). For example, the distance may be less than 300 ft in some embodiments. It is noted that the accuracy of the user's detected location may define whether posts overlap (and thus trigger a notification). For example, the accuracy of a GPS location measurement may be stored with a post. The accuracy may be represented in units of distance (e.g., meters or feet). In this manner the posts may have a radius defined by the accuracy of a location measurement or determination. If the area of one post overlaps another, a notification may be sent to one or more of the users that made the overlapping posts. It is contemplated that more than two posts may overlap in some cases and that each unique user may be notified of a new overlapping or nearby post. In one or more embodiments, a user making a new overlapping post may not be notified while the users that made the previous overlapping posts would be notified.

Notifications may be made by transmitting a signal or other data to a portable device 520 belonging to the user that made an overlapping post. Such a device may be identified by a user identifier and a device identifier. For instance, when a user logs in to the communications system via his or her portable device, the server may associate the user and his or her device and store this information in a database. For example, a user identifier may be associated with a device identifier which uniquely identifies the user's device. The device identifier may be transmitted to the server along with the user's username and password and/or other login information. In this manner, the device identifier may be retrieved using the user identifier. The device identifier may then be used by a server to send the device a notification. Since each post saved on a server may identify the user that made it, the device identifier can be found using the user identifier to notify that user's device that a post has been made next to one or more of that user's previous posts.

A server may be configured to retrieve posts within the user's current area or vicinity as disclosed above. The retrieved posts may then be sent by the server to a portable device for presentation, such as via a display **544**, to a user. In this manner, the user only sees posts in their current area or vicinity.

In one or more embodiments, the portable device **520** may allow the user to collect or catalog one or more posts, such as

by saving such posts on a storage device of a server and/or the portable device. This may occur for instance, by associating a user identifier with an identifier of the post to be cataloged. In this manner, all the posts a user has cataloged may be retrieved using the user's user identifier.

Cataloging posts is advantageous in that it allows users to keep or store posts that they like. This allows posts to be kept as reminders of various events or places. A user may be permitted to catalog posts of others and his or her own posts in some embodiments. A notification may be sent by the 10 server to a user that has had one or more of his or her posts cataloged by another user. This provides feedback to users that have posted. Cataloging also provides another benefit in that cataloged posts may be visible to the user regardless of the user's location, whereas other posts may only be visible to 15 the user if the user is at or near the location at which such posts

A user may categorize the posts he or she catalogs to create an organized list or index of posts. For example, cataloged posts may each be associated with a category name or type 20 when stored. In this manner, a user may quickly find particular cataloged posts. This allows a users to quickly find cataloged posts related to restaurants, stores, animals, and other categories. A user may desire to catalog posts having photos of particular objects or people, etc. . . . The posts are thus 25 saved in the user's own personal collection/catalog of posts. Since the user may be required to be at the location of a post to view it, the user may only catalog the post when at the location of the post as well. Thus the posts act like physical objects in that they can only be left, viewed, and cataloged 30 when a user is near or at the physical location of the post.

It is contemplated that the portable device may display a map for each post if so desired by the user. This is advantageous in that it allows the user to quickly see where a post was made. For instance, a user may be presented the location of 35 one or more posts in his or her catalog and then more easily recall the circumstance of the post and/or cataloging of the post. This allows the user to remember particular events or occurrences that may have occurred some time ago.

As can be seen, the communications system is advanta- 40 geous in that it is tied to physical locations. In this manner, the communications system provides a system that encourages users within a community or other area to post, converse, share information, and meet. This helps foster a cordial community. Though users may choose to remain anonymous on 45 the communications system, the fact that communication is between local users allows the communications system to be more intimate than traditional social networking, where one's friends may be (and typically are) geographically remote.

While various embodiments of the invention have been 50 described, it will be apparent to those of ordinary skill in the art that many more embodiments and implementations are possible that are within the scope of this invention. In addition, the various features, elements, and embodiments described herein may be claimed or combined in any combi- 55 elapses before the notification is transmitted. nation or arrangement.

What is claimed is:

1. A communication system comprising:

one or more communication devices that receive a plurality 60 of posts, each of the plurality of posts comprising location information and associated with at least one user identifier:

one or more location detecting devices that detect their own location and generate the location information, the loca- 65 tion information identifying the location; and one or more processors that:

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identify a subset of the plurality of posts that geographically overlap a new post received by the one or more communication devices, wherein each of the plurality of posts is deemed to geographically overlap the new post by determining if the new post is within one or more predefined areas around each of the plurality of posts;

transmit a notification to one or more user devices via the one or more communication devices, the one or more user devices being those identified by the at least one user identifier associated with each of the one or more posts in the subset;

wherein the one or more user devices are outside the one or more predefined areas when the notification is transmit-

- 2. The communication system of claim 1 further comprising one or more storage devices that store the plurality of posts.
- 3. The communication system of claim 1, wherein the one or more posts in the subset are transmitted to the one or more user devices via the one or more communication devices or one or more additional communication devices.
- 4. The of claim 1, wherein a predefined period of time elapses before the notification is transmitted.
 - 5. A communication system comprising:

one or more communication devices that receive a plurality of user generated content, each of the plurality of user generated content comprising location information and associated with at least one user identifier;

one or more location detecting devices that determine their own location and generate the location information based on the location; and

one or more processors that:

identify a subset of the plurality of user generated content by determining if the new user generated content received by the one or more communication devices is within one or more predefined areas around each of the plurality of user generated content;

transmit a notification to one or more user devices via the one or more communication devices, the one or more user devices being those identified by the at least one user identifier associated with each of the user generated content in the subset;

wherein the one or more user devices are outside the one or more predefined areas when the notification is transmitted.

- 6. The communication system of claim 5 further comprising one or more storage devices that store the plurality of user generated content.
- 7. The communication system of claim 5, wherein the user generated content in the subset is transmitted to the one or more user devices via the one or more communication devices or one or more additional communication devices.
- 8. The of claim 5, wherein a predefined period of time
- 9. A non-transitory storage medium storing instructions that, when executed, cause one or more processors to:

identify a subset of a plurality of user generated content by determining if new user generated content is geographically located within one or more predefined areas around each of the plurality of user generated content, wherein each of the plurality of user generated content comprises location information generated by one or more remote location detecting devices and is associated with at least one user identifier; and

transmit a notification to one or more user devices via one or more communication devices, the one or more user

devices being those identified by the at least one user identifier associated with each of the user generated content in the subset;

wherein the one or more user devices are outside the one or more predefined areas when the notification is transmit- 5 ted.

- 10. The non-transitory storage medium of claim 9, wherein the instructions cause the one or more processors to transmit the user generated content in the subset to the one or more users
- 11. The of claim 9, wherein a predefined period of time elapses before the notification is transmitted.

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